

REMARKS/ARGUMENTS

Claims 1-13, 15-29, 31 and 32 are pending in this application. By this Amendment, claim 22 is amended, and claim 30 is canceled without prejudice or disclaimer. Support for the claims can be found throughout the specification, including the original claims and the drawings. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested.

I. Allowable Subject Matter

The Examiner is thanked for the indication that claims 1-20 and 27-29 are allowed. It is noted that claim 21, which depends from allowed independent claim 1, is not rejected over art in the Office Action. Thus, it is assumed, for purposes of this reply, that claim 21 is also in condition for allowance.

II. Rejection Under 35 U.S.C. §102(b)

The Office Action rejects claims 22-24 and 31 under 35 U.S.C. §102(b) over U.S. Patent No. 6,406,246 to Itoh et al. (hereinafter "Itoh"). The rejection is respectfully traversed.

Independent claim 22 is directed to a tray transferring apparatus for transferring handling trays bearing electronic components. The apparatus includes a main frame, and a fixing unit installed on the main frame. The fixing unit is configured to hold a first tray with an upper side of the first tray positioned immediately adjacent to a lower side of the main frame. The apparatus also includes a gripper unit installed on the main frame. The gripper unit is configured to hold a second tray bearing a plurality of electronic components in holding depressions,

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wherein the gripper unit is configured to hold the second tray so that an upper side of the second tray is positioned immediately adjacent to a lower side of the first tray. Itoh neither discloses nor suggests such features, or the claimed combination of features.

Itoh discloses a device handler including a tray movement arm 205 that holds and moves customer service trays KSTs. The movement arm 205 includes a vertically oriented base plate 232 that is moved in the X-direction by a ball screw 231, and two tray holding plates 234 and 235 that extend horizontally outward from a main surface of the base plate 232. The upper and lower plates 234, 235 move in the Z-direction along a linear guide 233 under the power of first and second cylinders 236 and 237. A first KST is positioned on a top surface of the upper plate 234 and held in place by guide pins 238. A second KST is positioned adjacent to a bottom surface of the lower plate 235, and is held in place by a hook mechanism 239. The hook mechanism 239 includes hooks 240 at the corners of the lower plate 235 that are opened and closed by a link mechanism 242 and cylinder 241.

The Office Action draws a comparison between upper plate 234 disclosed by Itoh and the claimed main frame, between the guiding pins 238 disclosed by Itoh and the claimed fixing unit, and between the hook 240 disclosed by Itoh and the claimed gripper unit. If such a comparison is to be drawn, then Itoh neither discloses nor suggests the claimed gripper unit. That is, independent claim 22 requires that the fixing unit hold a first tray with an upper side of the first tray positioned immediately adjacent to a lower side of the main frame. In contrast, Itoh clearly discloses that a bottom surface of the first KST is positioned on a top surface of the

upper plate 234, or main frame. Thus, Itoh neither discloses nor suggests that the guiding pins 238, or fixing unit, holds the first KST in the manner specifically recited in independent claim 22.

Independent claim 22 also requires that the gripper unit be installed on the main frame. In contrast, in Itoh's handler, the hooks 240 are coupled only to the lower plate 235, and hold only the lower customer service tray KST in place beneath the lower plate 235. Itoh neither discloses nor suggests that the hooks 240, or gripper unit, are installed on the upper plate 234, or main frame, as is the gripper unit recited in independent claim 22.

Independent claim 22 also requires that the gripper unit hold the second tray so that an upper side of the second tray is positioned immediately adjacent to a lower side of the first tray. In contrast, in Itoh's handler, the upper and lower plates 234, 235 are sequentially positioned between the upper and lower customer service trays KSTs, thus prohibiting the hooks 240, or gripper unit, from holding the second KST immediately adjacent to a lower side of the first KST, as required by independent claim 22. Thus, Itoh neither discloses nor suggests a gripper unit that holds a second tray so that an upper side of the second tray is positioned immediately adjacent to a lower side of a first tray, as recited in independent claim 22.

Accordingly, it is respectfully submitted that independent claim 22 is not anticipated by Itoh, and thus the rejection of independent claim 22 under 35 U.S.C. §102(b) over Itoh should be withdrawn. Dependent claims 23, 24 and 31 are allowable at least for the reasons set forth

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above with respect to independent claim 22, from which they depend, as well as for their added features.

The Office Action rejects claims 22-26, 30 and 31 under 35 U.S.C. §102(b) over Japanese Patent No. 3-178792 (hereinafter "JP '792"). The rejection is respectfully traversed.

The features of independent claim 22 are set forth above. JP '792 neither discloses nor suggests such features, or the claimed combination of features.

JP '792 discloses a holding device including holding members 44 and 45 and abutting pieces 46 and 47 provided at opposite ends of a frame member 43. End parts 8a at one end of a plate 7 are fit into grooves 57 and 58 formed in the holding members 44 and 45, and end parts 8b at an opposite end of the plate 7 are held between the bottom of the abutting pieces 46 and 47 and abutting faces 55 of a moveable piece 49. Movement of the moveable piece 49 grasps or releases the edge 8b of the plate 7. JP '792 discloses an embodiment in Figure 7 that has a single frame member 4 having a single holding member 5/15 and a single abutting member 6/16 which appears to operate in a similar manner.

The plate 7 shown most clearly in Figures 7 and 8 of JP '792 does not include any type of holding areas which could accommodate any type of electronic devices. Further, it does not appear that the holding device disclosed by JP '792 could provide a stable enough grip on such a tray to ensure that electronic devices held thereon would not be released from the tray and/or damaged. Thus, JP '792 neither discloses nor suggests that the plate 7 held by the JP '792

holding device is a tray bearing electronic components, nor that the disclosed device could or should be used to transfer such a tray holding electronic components.

However, even if it is assumed that the device disclosed by JP '792 could be used to hold a tray of electronic devices, as required by independent claim 22, the holding device of JP '792 could very clearly only be used to hold one such tray of electronic devices. More specifically, independent claim 22 requires a fixing unit installed on a main frame that holds a first tray with an upper side thereof positioned immediately adjacent to a lower side of the main frame, and a gripper unit that holds a second tray so that an upper side of the second tray is positioned immediately adjacent to a lower side of the first tray. In contrast, in the embodiment shown in Figures 2 and 7 of JP '792, the plate 7 (considered a first tray) is held at the frame member 43 by the holding members 44 and 45, abutting members 46 and 47 and moveable piece 49. If this device were then to have to secure a second plate (not shown or discussed in JP '792) immediately adjacent to the lower side of the first plate 7, as required by independent claim 22, movement of the moveable piece 49 to pick up and accommodate such a second plate at a lower side of the first plate 7 would cause it to release and drop the first plate 7, thus damaging any electronic components held in the first plate 7.

Further, even if two plates 7 were first stacked and then picked up and held by the device, both plates 7 would be held by the holding members 44 and 45, abutting faces 55 and moveable piece 49. The Office Action asserts that the portion 52 of the holding members 44 and 45 that holds the first edge 8a of the plate 7 is comparable to the claimed fixing unit, and that the

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abutting faces 55 of the moveable piece 49 that hold the second edge 8b of the plate 7 are comparable to the claimed gripping unit. However, all of these elements (i.e., both those considered the fixing unit and those considered the gripping unit) are required to hold even a single plate 7. JP '792 neither discloses nor suggests a fixing unit that holds a first plate, in addition to a gripper unit that holds a second plate, a separate gripper unit that holds a second tray in the manner specifically recited in independent claim 22.

Accordingly, it is respectfully submitted that independent claim 22 is not anticipated by JP '792, and thus the rejection of independent claim 22 under 35 U.S.C. §102(b) over JP '792 should be withdrawn. Dependent claims 23-26, 30 and 31 are allowable at least for the reasons set forth above with respect to independent claim 22, from which they depend, as well as for their added features.

III. Rejections Under 35 U.S.C. §103(a)

The Office Action rejects claims 25-28 under 35 U.S.C. §103(a) over Itoh in view of U.S. Patent No. 6,379,103 to Okugi (hereinafter "Okugi"). It is noted that claims 27 and 28 depend from allowed independent claim 1, and are indicated as allowed in the Office Action. Thus, it is assumed, for purposes of this reply, that it was the Examiner's intention to reject only claims 25 and 26 under 35 U.S.C. §103(a) over Itoh in view of Okugi. The rejection is respectfully traversed.

Dependent claims 25 and 26 are allowable over Itoh at least for the reasons set forth above with respect to independent claim 22, from which they depend, as well as for their added

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features. Further, Okugi is merely cited as allegedly teaching biasing means, and thus fails to overcome the deficiencies of Itoh. Accordingly, it is respectfully submitted that claims 25 and 26, as well as claims 27 and 28, are allowable over the applied combination, and thus the rejection should be withdrawn.

The Office Action rejects claim 32 under 35 U.S.C. §103(a) over JP '792 in view of Itoh.

The rejection is respectfully traversed.

Dependent claim 32 is allowable over JP '792 at least for the reasons set forth above with respect to independent claim 22, from which it depends, as well as for its added features. Further, Itoh is merely cited as allegedly teaching a sensor, and thus fails to overcome the deficiencies of JP '792. Accordingly, it is respectfully submitted that claim 32 is allowable over the applied combination, and thus the rejection should be withdrawn.

IV. Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned, **Joanna K. Mason**, at the telephone number listed below.

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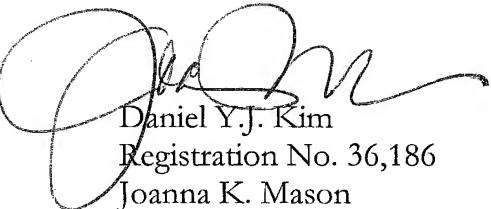
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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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